

Serial No.: 10/822,004
Docket No.: 101-1028
Amendment After Final dated: August 14, 2007
Reply to the Final Office Action of June 15, 2007

REMARKS

Introduction

Upon entry of the foregoing amendment, claims 1-27 and 29-40 are pending in the application. Claims 19-27 and 29-39 have been withdrawn from consideration. Claims 1 and 40 have been amended. No new matter is being presented. In view of the following remarks, reconsideration and allowance of all the pending claims are requested.

Entry of this Amendment is proper under 37 C.F.R. §1.116 because the claim amendments: (a) place this application in condition for allowance (for the reasons discussed herein), (b) do not raise any new issues requiring further search and/or consideration (since the amendments amplify issues previously discussed throughout prosecution as indicated in the Final Office Action), (c) present the rejected claims in better form for consideration on appeal (should an appeal be necessary), and (d) are necessary and were not earlier presented because they are made in response to arguments raised in the Final Office Action.

Accordingly, for at least the reasons discussed above, entry of this Amendment is respectfully requested.

1. Acknowledgement of application papers

The Applicants note that in the Office Action of June 15, 2007 (hereinafter the "Office Action"), the Examiner has again not indicated whether the drawings filed have been accepted. The Applicants respectfully request that the acceptability of the drawings be acknowledged.

2. Acknowledgement of a claim for foreign priority

In the present Office Action, the Applicant's claim for foreign priority under 35 U.S.C. §119(a) has again not been acknowledged. Copies of the priority document submission forms filed together with the application on 12 April 2004, and an official filing receipt for the application of 23 June 2004, were submitted with the Amendment of March 13, 2007. The Applicants respectfully request that the claim for foreign priority be acknowledged.

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3. Rejection under 35 USC §102(b): Abe et al.:

Claims 1, 3, 5-6, and 40 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Publication No. 2003/0086732 to Abe et al. Applicants respectfully request reconsideration and withdrawal of this rejection for at least the following reasons.

a. Claim 1:

With respect to independent claim 1, Applicants respectfully submit that claim 1 is currently amended to clarify a mounting of photosensitive drum unit and the intermediate transfer unit. As amended, none of the references cited by the Examiner disclose, teach, or suggest all of the limitations recited in independent claim 1.

In particular, Abe et al. is directed to an image forming apparatus with two pivotable sections, 3 and 50. See Abe et al., paragraphs [0036, 0070-72], FIG. 8. Abe et al. describes that an image forming unit 7 and a transfer belt unit 9 are both disposed on a second movable section 50. *Id.* In Abe et al., the first pivotable section 3 operates as a body door, and the second pivoting section 50 pivots around a shaft 66 to expose the image forming unit 7 and the transfer belt unit 9 mounted thereon so that the image forming unit 7 and the transfer belt unit 9 can be removed from the second movable section 50. *Id.* That is, in Abe et al. the transfer belt unit 9 and the image forming unit 7 are mounted or dismounted into the image forming apparatus by the pivoting movement of the second pivoting section 50 pivots around the shaft 66. Abe et al. does not describe that the transfer belt unit 9 and the image forming unit 7 are mounted independently from each other, or that they are mounted and dismounted in a vertical direction into and out of the image forming apparatus through an upper part of the main frame, and thus, Abe et al. does not teach, among other things, "a photosensitive drum unit detachably installed at a drum operating position in the internal space of the main frame through an upper side of the main frame, and having a photosensitive drum on which an electrostatic latent image is formed," "an intermediate transfer unit detachably installed at a transfer unit operating position in the internal space of the main frame through the upper side of the main frame independently from the photosensitive drum unit, and having a transfer belt to which a toner image is transferred from the photosensitive drum," or "wherein the photosensitive drum unit and the intermediate transfer unit are sequentially mounted and dismounted into and from the internal

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space through the upper side of the main frame, the intermediate transfer unit is installed above the photosensitive drum unit, and the photosensitive drum unit and the intermediate transfer unit operate in the drum operating position and the transfer unit operating position, respectively," as presently recited in independent claim 1.

Accordingly, it is respectfully submitted that since Abe et al. does not teach all of the elements set forth in claim 1, as presently recited, independent claim 1 is patentably distinguishable from Abe et al., and withdrawal of this rejection and allowance of this claim are respectfully solicited.

b. Claims 3 and 5-6:

With respect to claims 3 and 5-6, it is respectfully submitted that for at least the reason that claims 3 and 5-6 depend from independent claim 1, which is patentably distinguishable from Abe et al. for at least the reasons provided above, and therefore contain each of the features as presently recited in independent claim 1, dependent claims 3 and 5-6 are also patentably distinguishable from Abe et al., and withdrawal of this rejection and allowance of these claim are respectfully solicited.

Furthermore, as described above, Abe et al. describes that an image forming unit 7 and a transfer belt unit 9 are both disposed on a second movable section 50. See Abe et al., paragraphs [0036, 0070-72], FIG. 8. The image forming unit 7 comprises Y, M, C, and K, image forming stations, i.e. developing units. See Abe et al., paragraph [0043]. As described above, in Abe et al. the transfer belt unit 9 and the image forming unit 7 are mounted or dismounted into the image forming apparatus by the pivoting movement of the second pivoting section 50 pivots around the shaft 66. That is, the image forming unit 7 is mounted by the pivoting movement of the second pivoting section 50, and accordingly, the Y, M, C, and K image forming stations are also pivotably mounted on the image forming apparatus. Abe et al. does not describe the horizontal sliding of the image forming stations, and thus, Abe et al. does not teach or suggest, among other things, "wherein the plurality of development units slide in a horizontal direction and are detachably installed on the main frame," as recited in claim 6.

Accordingly, claim 6 is itself patentably distinguishable from Abe et al., and withdrawal of this rejection and allowance of this claim is respectfully solicited.

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c. Claim 40:

With respect to independent claim 40, Applicants respectfully submit that claim 40 is currently amended to clarify a mounting of photosensitive drum unit and the intermediate transfer unit. As amended, none of the references cited by the Examiner disclose, teach, or suggest all of the limitations recited in independent claim 40.

In particular, as described above, Abe et al. is directed to an image forming apparatus with two pivotable sections, 3 and 50. See Abe et al., paragraphs [0036, 0070-72], FIG. 8. In Abe et al., the first pivotable section 3 operates as a body door, and the second pivoting section 50 pivots around a shaft 66 to expose the image forming unit 7 and the transfer belt unit 9 mounted thereon so that the image forming unit 7 and the transfer belt unit 9 can be removed from the second movable section 50. *Id.* That is, in Abe et al. the transfer belt unit 9 and the image forming unit 7 are mounted or dismounted into the image forming apparatus by the pivoting movement of the second pivoting section 50 pivots around the shaft 66. Abe et al. does not describe that the transfer belt unit 9 and the image forming unit 7 are mounted independently from each other, or that they are mounted and dismounted in a vertical direction into and out of the image forming apparatus through an upper side of the main body, and thus, Abe et al. does not teach, among other things, "a photosensitive drum unit detachably installed in the internal space of the main frame through an upper side of the main frame, and having a photosensitive drum on which an electrostatic latent image is formed," "an intermediate transfer unit detachably installed in the main frame through the upper side of the main frame independently from the photosensitive drum unit, and having a transfer belt to which a toner image is transferred from the photosensitive drum," or "wherein the photosensitive drum unit and the intermediate transfer unit are sequentially mounted and dismounted into and from the internal space through the upper side of the main frame, and an electrostatic latent image formed on the photosensitive drum is developed by at least two developing rollers and transferred to the intermediate transfer unit from the photosensitive drum," as presently recited in independent claim 40.

Accordingly, it is respectfully submitted that since Abe et al. does not teach all of the elements set forth in claim 40, as presently recited, independent claim 40 is patentably

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distinguishable from Abe et al., and withdrawal of this rejection and allowance of this claim are respectfully solicited.

4. Rejection under 35 USC §103(a): Abe et al. and Nonami:

Claims 2, 4, and 7-13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Abe et al. in view of U.S. Patent No. 4,837,598 to Nonami. Applicants traverse this rejection for at least the following reasons.

a. Claims 2, 4, and 7:

With respect to claims 2, 4, and 7, it is respectfully submitted that for at least the reason that these claims depend from independent claim 1, which is allowable over Abe et al. for at least the reasons pointed out above, and therefore contains each of the features as recited in claim 1, dependent claims 2, 4, and 7 are also allowable over Abe et al. Further, since Nonami does not teach or suggest any of the limitations which are lacking in Abe et al., this claim is allowable over both Abe et al. and Nonami, separately or in combination. Accordingly, withdrawal of this rejection and allowance of this claim are respectfully requested.

b. Claim 8:

With respect to claim 8, it is respectfully submitted that for at least the reason that dependent claim 8 depends from independent claim 1 and dependent claim 6, which are allowable over Abe et al. for at least the reasons pointed out above, and therefore contains each of the features as recited in claims 1 and 6, dependent claim 8 is also allowable over Abe et al. Further, since Nonami does not teach or suggest any of the limitations which are lacking in Abe et al., this claim is allowable over both Abe et al. and Nonami, separately or in combination.

Furthermore, the Examiner alleges that "the teaching of a bushing at the ends of a development roller is known in the art," and references the cited references. See Office Action, page 3. However, the Examiner has not pointed out where these references describe, if at all, "a bushing rotatably installed at both ends of the developing roller to contact the photosensitive drum when the developing roller is spaced apart from the photosensitive drum by the developing gap," as recited in claim 8. Neither of the cited references, Tanaka et al. or Arai et

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al., even mention "bushings" in their respective disclosures, and Tanaka et al. is instead directed to a "spacing-adjustment motor 16A permits to adjust the distance L between the photoconductor drum 2 and each of the developing rollers 13A-13D." See Tanaka et al., paragraph [0082].¹

Accordingly, neither reference demonstrates that "a bushing rotatably installed at both ends of the developing roller to contact the photosensitive drum when the developing roller is spaced apart from the photosensitive drum by the developing gap," as recited in claim 8, is well known in the art, and thus,, the Examiner has not provided any documentary evidence to support this allegation of common knowledge in the art, as required under M.P.E.P. § 2144.03:

Ordinarily, there must be some form of evidence in the record to support an assertion of common knowledge. See *Lee*, 277 F.3d at 1344-45, 61 USPQ2d at 1434-35 (Fed. Cir. 2002); *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 (holding that general conclusions concerning what is "basic knowledge" or "common sense" to one of ordinary skill in the art without specific factual findings and some concrete evidence in the record to support these findings will not support an obviousness rejection).

Therefore, the rejection of claim 8 under 35 U.S.C. §103(a) is improper, and withdrawal of this rejection and allowance of this claim are earnestly solicited.

c. Claims 9-10:

With respect to claims 9-10, it is respectfully submitted that for at least the reason that these claims depend from independent claim 1 and dependent claim 6, which are allowable over Abe et al. for at least the reasons pointed out above, and therefore contain each of the features as recited in claims 1 and 6, dependent claims 9-10 are also allowable over Abe et al. Further, since Nonami does not teach or suggest any of the limitations which are lacking in Abe

¹ . Previously, the Examiner referenced Komuro (JP 2003043813) to allege that "Komuro teaches spacer rollers for setting the development spacing." See Office Action of 19 December 2006, page 5, item 7. However, Komuro (JP 2003043813) describes spacer rollers provided at either ends of an image development roller to maintain a specific interval between a photoreceptor and the roller. See Komuro, abstract. As presented in the prior Amendment of March 13, 2007, this does not demonstrate that "a bushing rotatably installed at both ends of the developing roller to contact the photosensitive drum when the developing roller is spaced apart from the photosensitive drum by the developing gap," as recited in claim 8, is well known in the art.

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et al., these claims are allowable over both Abe et al. and Nonami, separately or in combination.

d. Claims 11-13:

With respect to claims 11-13, it is respectfully submitted that for at least the reason that these claims depend from independent claim 1 and dependent claim 6, which are allowable over Abe et al. for at least the reasons pointed out above, and therefore contain each of the features as recited in claims 1 and 6, dependent claims 11-13 are also allowable over Abe et al. Further, since Nonami does not teach or suggest any of the limitations which are lacking in Abe et al., these claims are allowable over both Abe et al. and Nonami, separately or in combination.

Furthermore, on page 4 of the Office Action, the Examiner alleges that "it would have been obvious... to use the teachings of a pre-transfer eraser as is known in the art with that (sic) image forming device of Abe et al. since a pre-transfer eraser increases transfer efficiency." However, neither of the cited references, Tanaka et al. or Arai et al., describes "erasers" in their respective disclosures, much less pre-transfer erasers with the limitations recited in these claims. ²

Accordingly, the Examiner has not provide any documentary evidence to support this allegation of common knowledge in the art, as required under M.P.E.P. § 2144.03, and therefore, the rejection of claims 11-13 under 35 U.S.C. §103(a) are improper, and withdrawal of this rejection and allowance of this claim are earnestly solicited.

5. Rejection under 35 USC §103(a): Abe et al. and Hamano et al.:

Claims 14-18 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Abe et al. in view of U.S. Publication No. 2004/0170450 to Hamano et al. Applicants traverse this rejection for at least the following reasons.

² Previously, the Examiner had referenced Oogi et al. (U.S. Patent No. 6,167,211) to allege that "Oogi et al. teaches a pre-transfer eraser." See Office Action of 19 December 2006, page 5, item 7. However, as presented in the Amendment of March 13, 2007, this general allegation of the Examiner does not take into account all the limitations recited into this claims, such as, among other things, "an erasing lens," as recited in claims 11-13, which are nowhere mentioned in Oogi et al. That is, Oogi et al. cannot be used to show that all the limitations recited in these claims are well known in the art, when Oogi et al. does not even mention, among other things, "a pre-transfer erasing lens," as recited in these claims.

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With respect to claims 14-18, it is respectfully submitted that for at least the reason that these claims depend from independent claim 1, which is allowable over Abe et al. for at least the reasons pointed out above, and therefore contains each of the features as recited in claim 1, dependent claims 14-18 are also allowable over Abe et al. Further, since Hamano et al. does not teach or suggest any of the limitations which are lacking in Abe et al., this claim is allowable over both Abe et al. and Hamano et al., separately or in combination. Accordingly, claims 14-18 are patentable over Abe et al. and Hamano et al., separately or in combination, and withdrawal of the rejection and allowance of these claims are earnestly solicited.

Conclusion

It is respectfully submitted that a full and complete response has been made to the outstanding Office Action and, as such, there being no other objections or rejections, this application is in condition for allowance, and a notice to this effect is earnestly solicited.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided below.

If any further fees are required in connection with the filing of this amendment, please charge the same to our Deposit Account No. 502827.

Respectfully submitted,

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